

GREEN OBSIDIAN MINE  
PLAN OF OPERATIONS  
AND  
ENVIRONMENTAL  
ASSESSMENT  
OR-025-02-063

Bureau of Land Management  
Burns District Office  
Three Rivers Resource Area  
28910 Hwy 20 West  
Hines, Oregon 97738

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CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Purpose and Need

In September 2002, John Faust provided to the Burns District Bureau of Land Management (BLM) a Plan of Operations for mining obsidian on mining claim CBC#1, ORMC 153808.

The regulations at 43 CFR 3809.411(3) (iii) do not allow BLM to approve a Plan of Operations until completion of environmental analysis and the Plan of Operations is made available for public comment. The Mining Law Regulations at 43 CFR 3809.101 state that minerals that may be common variety minerals, such as obsidian, may not be mined until BLM has prepared a mineral examination report to determine whether or not the mineral is a common or uncommon variety. The BLM may process a mine Plan of Operations for those claims for the interim until the mineral examination report is completed if the claimant makes payments into an escrow account for the appraised value of the possible common variety minerals removed. Approval of a Plan of Operations may be subject to changes or conditions that are necessary to meet the performance standards of 43 CFR 3809.420 and to prevent undue and unnecessary degradation of public land.

The obsidian in the claim area is desirable for its various shades of green, blue, and silky black colors. The unique coloration of this obsidian and limited distribution creates a high demand for the marketing of this material. It is marketed to rock shops for collectors and as material for working into replicas of ancient tools such as arrowheads, knives, and spearheads. The mining operations would provide this unique colored obsidian to help fill the public demand for this material.

It is desirable to use mechanized equipment in mining under a Plan of Operations because it is difficult to cut juniper trees, stockpile topsoil, excavate, backfill excavations, and respread topsoil with hand tools as a casual use activity.

B. Background and Location

Mining claim CBC#1, ORMC 153808, is located approximately 8 miles northwest of Burns, Oregon (Figure 1). The claim covers approximately 20 acres west of Skull Creek Road in T. 22 S., R. 29 E., Section 24 NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>. The claim is reached by traveling 0.8-mile west of Skull Creek Road on an unbladed access road. The mining claim and access road are entirely on public land with Federal mineral estate.

The claim is located across the top of a gentle ridge. There are no intermittent streams, perennial streams or wetlands on the claim or along the unbladed access road from Skull Creek Road. The elevation ranges from 5,000 to 5,200 feet.

A former claim was filed at the site in 1971, mined for green obsidian with a backhoe or dozer between 1971 and 1982, and lapsed in 1994 due to nonpayment of the annual filing fee. This current claim was filed in 1998 by a previous claimant, was mined for green obsidian with a backhoe under a BLM notice in 1999, was sold by the previous claimant to the current claimants, and has been mined by hand tools from 1999 to present. In 2001 new 43 CFR 3809 mining law regulations came into effect that require mining to be under a Plan of Operations instead of a Notice.

C. Relationship to Locatable Versus Saleable Mineral Issue

Obsidian is routinely considered a saleable mineral rather than a locatable mineral available for claim under the mining law. No mining claim validity exam is planned in the near future at this site, so the claimants have time to establish a sales and expenses record in the interim. BLM will not require these claimants to put their earnings from sales of the obsidian into an escrow account. BLM does require the claimants to maintain records of earnings and expenses for review by a Certified Mineral Examiner at an unspecified future date. These records will help the claimants show that they can mine and market the obsidian at a profit and thereby help establish the validity of the obsidian claim.

D. Relationship to Planning/Conformance with Land Use Plans and Regulations

The Three Rivers Resource Management Plan (RMP) completed in 1992 is the current BLM land use plan for this area. The RMP states in management action EM 2.1: "Provide for mineral material needs in approved pits as shown in Table 2.25. New mineral materials sites will be considered on a case-by-case basis where existing sites or materials do not adequately provide for needs." Energy and Minerals objective EM 3 calls for providing maximum opportunity for mineral exploration and development on Federal mineral estate in areas identified as open to operation of the mining laws. Cultural Resources Objective CR 2.4 states: "Manage obsidian source/quarry areas for scientific and public uses." Recreation objective R1 calls for establishing and managing intensive-use areas to protect areas for their scientific, educational and/or recreational values while accommodating the projected increase in use for recreation activities. Map R-1 Recreation Use Areas and Map R-3 Recreational Minerals show this obsidian area.

The proposal is in conformance with the RMP and Harney County land use plan as well as applicable Federal, Tribal, State, and County plans, statutes, and regulations.

This Environmental Assessment (EA) is prepared in compliance with the National Environmental Policy Act, the Surface Management regulations at 43 CFR 3809, and the Mining Use and Occupancy regulations at 43 CFR 3715.

## CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

### A. Proposed Action

The proposed action is to conduct small-scale mining on the 20-acre mining claim CBC#1, ORMC 153808. The Plan of Operations is available as Appendix 1. The operator would be Craig Ratzat, who is also the claimant.

Since the Plan of Operations was written, J.M. and John Faust are no longer claimants nor operators. There was also a minor omission in the plan which since has been added and that is no catch basins resulting in standing water would be left on the claim.

Mining would be conducted seasonally, between May 5 to October 31, as road conditions on Skull Creek Road and Industrial Fire Precaution Levels allow. Mining would be conducted using a small excavator and dump truck. All work would be done during daylight hours. No explosives would be used.

Access to the claim would be from Skull Creek Road and the existing unbladed road (map titled Figure 1). The unbladed road forks at the base of the ridge, with a steeper road on the right and a gentler road on the left. The steeper road to the claim discovery post dates back to 1971 and is shown on Figure 1. The gentler road was pioneered without blading in 1999 and is not on Figure 1. The claimants/operators would reclaim the steeper road and any additional routes that they use for access within the claim. The claimants/operators propose to not reclaim the gentler road from Skull Creek Road to the 1971 claim discovery post.

Under this Plan of Operations the claimants/operators would be allowed to cut trees, blade routes, and drive cross-country anywhere within the claim as desired. They would need to conduct ongoing reclamation in order to keep total surface disturbance below the 5-acre threshold for permitting by the Oregon Department of Geology and Mineral Industries. Their reclamation cost would be reviewed annually by BLM and the operators would revise their financial guarantee as needed to cover the cost of reclamation by a third party.

To discourage introduction of noxious weed seeds to the claim, the operators would clean equipment to be used for mining before working onsite. Equipment such as the excavator, dump truck, and vehicles used for transport would be cleaned of vegetative material (seed, debris, etc.). The operators would monitor for weeds on disturbed areas annually. If noxious weeds are found on the claim, control treatments would be done or arranged for by the operators, depending on the size and type of the infestations.

When excavation work requires removal of juniper trees on the claim, the operators would first notify Burns District BLM and purchase a vegetative removal permit. Stumps would be cut to a height of 6 inches or less.

When limbing trees for access to new excavation sites on the claim, each limb would be cut to the trunk of the tree. The juniper boughs would be scattered, buried or piled out of the way on the claim while they are still green and easy to handle. Piles would be burned after they have dried. The operators must first contact Burns Interagency Fire Zone dispatch to comply with any fire closures or restrictions in effect and to let dispatch know what days to expect smoke from the site.

At the beginning of excavating each test pit, topsoil would be set aside in stockpiles. Test pits with undesirable rock would be backfilled within 24 hours. Test pits with desirable rock would be enlarged, mined by hand-sorting to remove commercially useable rock, and backfilled within 5 days of the start of excavation. At the conclusion of backfilling each site, the ground surface would be shaped to blend with the adjacent ground and the topsoil stockpile would be spread over the surface.

Approximately one truckload of rock would be hauled from the claim per week and approximately 25 cubic yards of obsidian would be removed per year during the mining season. If hauling on the Skull Creek Road

is done during wet conditions or if more than five truckloads per day are hauled, then the operators would help pay for road maintenance at a rate determined by the BLM.

No open holes would be left at the site when equipment is removed for the winter.

Hand-dug holes, including unauthorized digging on the claim, would be backfilled by the operators. The operator would be responsible for providing erosion control measures as needed and seeding the disturbed areas in the fall using a weed-free seed mix approved by Burns District BLM. The operators would obtain BLM specifications and approval before constructing any temporary fence to aid in reclamation. The operator is responsible for all costs required for reclamation, including all necessary materials and labor.

To establish a competitive plant community which would discourage the establishment of nonnative invasive plants such as cheatgrass, the operators would annually seed in the fall. Seeds recommended by BLM for use in reclamation are: Big sagebrush (Wyoming or Mountain subspecies) and bitterbrush (shrubs); bluebunch wheatgrass, Sandberg's bluegrass, Thurber's needlegrass, and Idaho fescue (grasses); and blue flax (Lewis flax); tail-cup lupine, annual sunflower, and yarrow (forbs). The operators may request BLM approval to seed other species.

The operators may collect native seed from the claim for use in reclamation after obtaining a collecting permit from Burns District BLM so that BLM can track the species and the amount of seed collected.

All fuel and other petroleum maintenance materials would be brought in as needed for use and removed the same day, no fuel or petroleum would be stored onsite. A spill kit that meets BLM approval would be kept onsite during operations for use in the event of accidental spills. All trash or debris would be removed from the site and disposed of properly.

All equipment would be removed each fall for the winter, during high fire danger (Industrial Fire Precaution Level IV—General Shutdown), and for periods of inactivity longer than 5 days.

The equipment operators/claimants would maintain a record of earnings and expenses for review by a Certified Mineral Examiner at an unspecified future date. As part of these records, a daily log or mining record would be kept by the operators to record the date, location and dimensions of excavations, material recovered, number of people working, hours worked, equipment costs, and transportation costs.

Signs or metal tags would be posted on the claim corners, discovery post, and where the unbladed access road enters the claim to identify and provide location information about the claim. In addition, the claim boundaries would be marked.

The claimants/operators would be allowed to block the access routes within the claim boundaries with logs or rocks whenever they want. This would help protect exposed obsidian from removal by the general public by not allowing the public to drive up to the digging areas. The general public would still be allowed to walk across the claim or drive elsewhere across the claim. Only the claimants would be considered by BLM to have the legal right to the rocks and minerals on the claim pending a validity exam by a BLM certified mineral examiner. Unauthorized removal of obsidian from the claim is a civil court matter. The claimants would mark their claim boundaries so that the general public does not unknowingly encroach on the claim.

The operators would leave no means of occupancy such as trailers or tents on BLM land for more than 14 calendar days in any 90-day period.

The operators would be provided with a map showing the location of known prehistoric quarry sites to help them avoid the sites. If any additional site is discovered, the operators would leave such discovery intact, notify the BLM authorized officer, and not proceed until told to proceed by the authorized officer. Authorization to proceed would be within 10 working days following notification when possible. The claimants would mark their claim boundaries so they do not encroach on known prehistoric quarry sites outside of the claim.



This Plan of Operations/EA would be in effect for 20 years provided that the operators conduct operations in compliance with the approved Plan of Operations; operate in accordance with applicable Federal and State mining, environmental, and safety laws and regulations; and provide an acceptable financial guarantee that covers the cost to reclaim the operations. Any extension beyond 20 years would require a modification of the Plan of Operations and a new EA.

B. No Action Alternative

Under this alternative there would be no mechanized means used for mining on the mining claim. The claimants would be allowed to use hand tools to remove obsidian as a casual use activity. Vehicles would continue to be driven to the claim and across the claim.

Signs or metal tags would be posted on the claim corners, discovery post, and where the unbladed access road enters the claim to identify and provide location information about the claim.

Test pits and mine excavations would be left open for years as long as there was no safety hazard due to the considerable amount of work required to excavate and backfill with hand tools.

There would be no reclamation of the steeper unbladed access road.

Approximately 0.1-acre would be disturbed and 2 cubic yards of obsidian would be removed per year.

There would be no financial guarantee to help ensure site management and reclamation according to the proposed action and BLM conditions of approval.

### CHAPTER III. AFFECTED ENVIRONMENT

A. Critical Elements

The following critical elements are not known to be present or would not knowingly be affected by the proposed action or no action alternative and, therefore, will not be discussed further in this document: air quality, Areas of Critical Environmental Concern, prime or unique farmlands, floodplains, hazardous materials, American Indian religious concerns, environmental justice, threatened or endangered plant or animal species, water quality (surface and groundwater), wetlands or riparian zones, suitable or designated Wild and Scenic Rivers, Wilderness, and Wilderness Study Areas. No paleontological resources nor American Indian traditional use areas are known to occur within the claim. No known adverse effects would occur to energy development, production or distribution as a result of the proposed action.

The following critical elements are present and may be affected by the proposed action or alternatives and are subject to analysis:

1. Cultural Resources

There are three prehistoric quarry sites identified outside but near the claim, and one prehistoric quarry site at the southeastern corner of the claim. At these prehistoric quarry sites, surface exposures of black obsidian cobbles include split cobbles, some of which may be of cultural origin, and some core or trade bifaces.

No final status determination has been made for these sites' inclusion in the National Register. Preliminary indications point to none of the four sites being eligible for listing in the National Register.

2. Migratory Birds

Some migratory birds are known to use the claim area for nesting, foraging, and resting as they

pass through on their yearly migrations.

3. Noxious Weeds

There are currently no known infestations of noxious weeds in the immediate vicinity of the mining claim. However, whitetop and Dalmation toadflax do occur in the general area.

4. Solid Waste

Small amounts of litter are deposited by the general public visiting the site.

B. Noncritical Elements

1. Fire Management/Closures and Restrictions

If sparks from activities ignite a fire, the person responsible is obligated to take initial suppression action and notify Burns District BLM as soon as possible. The person responsible for ignition is liable for the cost of suppression actions and resource damage from any fires started by their activities.

There have been wildfires within the general vicinity although there are no existing records of fire occurrence on the claim site.

Fire closures help in avoiding and suppressing fires and are designated Level I, Level II, Level III, and Level IV in the list of Industrial Fire Precaution Levels.

At “Closed Season” (Level I) conditions, the operator would need to carry fire tools (a shovel and either 5 gallons of water or a 10-pound fire extinguisher). A 1-hour fire watch is required after shutting down for the day.

Under “Partial Hootowl” (Level II) conditions, in addition to the above the operator may have no open flames such as those used in welding, and operate no power saws between 1 p.m. and 8 p.m. (during the heat of the day).

Under “Partial Shutdown” (Level III) conditions, in addition to the above the operator may not use any spark-generating equipment (vehicles, generator) between 1 p.m. and 8 p.m.

In “General Shutdown” (Level IV) conditions all operations are prohibited.

In addition to fire closures there are fire restrictions such as those on smoking outdoors, campfires, driving off-road across vegetated areas, and driving on roads with vegetation strips down the middle. Fire restrictions are primarily aimed at the general public, but apply to industry as well.

“General Shutdown” conditions and fire restrictions frequently are in effect in the claim area in July and August. The operators would phone (541) 573-4555 for a recording stating the current Industrial Fire Precaution Level and current fire restrictions. The operators would phone (541) 573-1000 to talk to a dispatcher for clarification and to report a fire.

## 2. Geology/Mineral Resources

The obsidian is associated with rhyolite lava flows and domes in a broad area of 10 to 20 square miles. Rock in the upper 2 feet of the ground surface is in the freeze-thaw zone where it fractures, so it is not as desirable as deeper rock.

There are currently fewer than 5 acres of total surface disturbance and there has been removal of approximately 20 cubic yards of obsidian in the general area in the past. There have been no holes drilled on this claim which are deeper than 50 feet.

According to the Three Rivers RMP the claim area has high potential for gold, mercury, and uranium and low potential for oil and gas and geothermal resources.

3. Lands/Realty

Access to and from the site would be on Skull Creek Road, which is all public land or public easement. Skull Creek Road is a crowned and ditched main arterial road into the area. It is constructed of native materials and is suited for most uses, including moderate hauling, during dry conditions. BLM maintains a seasonal road closure on Skull Creek Road during spring thaw from approximately February 1 to May each year to protect the road and adjacent resources from damage by indiscriminate use.

The unbladed access road to the claim ends at the claim discovery post.

4. Livestock Grazing Management

The mining claim is located within the early turnout pasture of the Skull Creek Allotment. This pasture is used every year from April 20 to May 5. The majority of livestock grazing occurs prior to the emergence of seed stalks on the grasses. The permitted grazing use is approximately 800 head of livestock on 5,449 BLM acres by Blue Mountains Cattle Company and Hotchkiss Cattle Company.

The claim is located one-half mile west of a water source for livestock and wildlife (Killdeer Reservoir).

5. Recreation

Recreation activities in the area include rock collecting, sightseeing, hiking, and some hunting for deer and upland birds. The towns of Burns and Hines and the Paiute Indian Reservation, with a combined population of approximately 6,000 people, are approximately 8 miles away.

The claim area has an open Off-Highway Vehicle classification which does not prohibit off-road travel.

6. Visual Resource Management

The claim area is in Visual Resource Management (VRM) Class IV, which allows modification of the existing character of the landscape and allows activities that may dominate the view and be a major focus of viewer attention.

7. Vegetation/Woodlands

The dominant vegetation consists of juniper trees, sagebrush, and Sandberg's bluegrass with some areas of dense mountain mahogany. Forestry resources are not present.

Abundant plant species in the area are western yarrow, rosy pussytoes, blue-eyed Mary, poverty weed, and biscuitroot. *Pedicularis centrathera* (dwarf lousewort), a BLM Bureau Tracking species, is abundant and stable throughout the area. Several large populations of over 500 individuals were found, one of which extends onto the claim, in addition to numerous smaller populations. This species is found in a wide variety of plant communities and is tolerant of disturbance. Mitigation for Bureau Tracking species is optional according to BLM policy.

Cheatgrass, which is an invasive nonnative species, is present at the disturbed areas where mining was done prior to this Plan of Operations. In addition, fiddlehead, crested wheatgrass, and squirreltail bottlebrush are growing in those disturbed areas. Seeded at those disturbed areas in 1999 were yarrow and local grass seed collected from local plants in addition to bluebunch wheatgrass, Indian ricegrass, and fourwing saltbush. The crested wheatgrass was apparently

seeded between 1971-1982.

Lack of seeding success in the disturbed areas may be due to drought conditions, not spreading enough seed to outcompete cheatgrass, or not spreading the right seed mix to outcompete cheatgrass. Spreading seed annually would increase the likelihood of seeding during a normal precipitation or wet year to counteract the drought conditions of the past 4 years.

The Skull Creek area is a prime area for juniper bough harvesting. Every year the area is under permit for gathering from early August through November. Generally the trees with berries are scattered and may or may not appear on the claim in any given year.

8. Wildlife

No Special Status wildlife species including sage-grouse are known to inhabit this area. The claim is within mule deer winter range. Elk may be found in the area. Numerous small mammals and birds associated with the sagebrush steppe may be found in this area such as coyotes and raptors.

The claim is located one-half mile from a water source for livestock and wildlife.

#### CHAPTER IV. ENVIRONMENTAL CONSEQUENCES INCLUDING CUMULATIVE EFFECTS

A. Proposed Action - Critical Elements

1. Cultural Resources

There is one prehistoric archaeological site known to exist within the claim boundary and there are three additional prehistoric quarry sites adjacent to the claim boundary. Mining operations would present the potential for accidental damage, artifact collection by unauthorized people, and destruction of site integrity. This would be mitigated by providing a map to the operators of the location of the quarry site that is on the claim to help them avoid it, and having the mine operators mark the claim boundary to ensure avoidance of the off claim sites.

Cumulative Effects – It is anticipated that there would be no cumulative effects on cultural resources as a result of implementing the proposed action.

2. Migratory Birds

Species that prefer dense juniper or mountain mahogany habitat would be disturbed and would relocate temporarily as excavation occurs selectively across the 20-acre claim.

Cumulative Effects – There would be no known cumulative effects to migratory birds as a result of implementing the proposed action.

3. Noxious Weeds

Noxious weeds may establish in areas disturbed by mining. Opportunities exist for weed seed introduction on equipment and vehicles. The more times equipment or vehicles come to the site from elsewhere, the more likely introductions would occur. Measures listed in the proposed action would prevent noxious weed invasion on the claim.

Cumulative Effects – There would be no known cumulative effects on noxious weeds as a result of implementing the proposed action.

4. Solid Waste

There would be no accumulation of garbage or other solid waste on the claim due to removal and proper disposal by the operators.

Cumulative Effects – There would be no known cumulative effect on solid waste as a result of implementing the proposed action.

B. Proposed Action - Noncritical Elements

1. Fire Management/Closures and Restrictions

Removal of dense juniper and mountain mahogany vegetation at selected sites within the 20-acre claim would reduce wildland fire fuel at the sites. Equipment activity at the sites would increase the likelihood of a fire at the sites but it is mitigated by the operators following fire closures and restrictions.

Cumulative Effects – There would be no cumulative effects on fire management as a result of implementing the proposed action.

2. Geology/Mineral Resources

Up to 20 acres would be disturbed (the total area of the claim) and approximately 500 cubic yards of rock could be removed from the claim (25 cubic yards per year multiplied by 20 years) and provided to purchasers to meet demand.

Thunderegggs have been observed within the claim. These mineral resources may be mined by the claimants/operators under this Plan of Operations/EA if they are mined in the same manner and degree as mining obsidian described in the proposed action.

Cumulative Effects – The cumulative effects on Geology/Mineral Resources would be the removal of approximately 500 cubic yards of rock with possible surface disturbance of up to 20 acres. This would be mitigated by the reclamation stipulations outlined in the proposed action.

3. Lands/Realty

Continuous, heavy hauling of mined material on Skull Creek Road, particularly during wet conditions, could result in road damage such as rutting, powdering, and washboarding. This would create unsafe conditions, erosion, and sedimentation until road maintenance work is done.

The claimants/operators would reclaim tracks established by their repeated use within the claim beyond those already established, they would reclaim the steep road within the claim, and they would establish no new tracks outside the claim.

Cumulative Effects – There would be no known cumulative effect to Lands/Realty as a result of implementing the proposed action.

4. Livestock Grazing Management

Cattle may graze on newly-seeded areas and as a result there may be slow reclamation success unless a temporary fence is installed around newly-seeded areas. Claim operations would have no effect on livestock grazing management as long as operations do not begin until after May 5 each year as proposed. There would be no necessary adjustment of AUMs on grazing permits to take into account mining on 20 acres.

Cumulative Effects – There would be no known cumulative effect to livestock grazing as a result of implementing the proposed action.

5. Recreation

The claimants/operators would be allowed to block recreationists and others from driving within the claim boundaries along access routes established by the operators in order to help protect exposed obsidian from removal by the general public. The general public would still be allowed to walk across the claim or drive elsewhere across the claim or remove obsidian from obsidian collection areas surrounding the claim.

Backfilling test pits with undesirable rock within 24 hours and backfilling test pits with undesirable rock within 5 days would help keep casual recreationists from removing obsidian that the claimants prize the most.

Cumulative Effects – There would be no known cumulative effect to recreation use as a result of implementing the proposed action.

6. Visual Resource Management

Removal of trees and other vegetation by mining operations on the 20-acre claim would result in a change in the landscape. However, the claim is approximately one-half mile from Skull Creek Road, so small individual pits and stumps would probably not be noticed by the casual observer.

Cumulative Effects – There would be as much as 20 acres of surface disturbance with some vegetation removed. This would have some effect on visual resources in the short term but there would be no cumulative effect on visual resources with completion of reclamation and reestablishment of vegetation which could take several years.

7. Vegetation/Woodlands

This Plan of Operations would not impact the Bureau Tracking species.



There would be fewer juniper and mountain mahogany trees on the 20-acre claim area with potential that all of the 20-acre claim area would be covered with shrubs, grasses, and forbs.

Seeding disturbed areas with a mix of shrubs, grasses, and forbs would provide vegetative cover for soil protection, a varied plant community structure, and palatability for wildlife and livestock. Repeated seeding by the claimants/operators until reclamation success is reached would establish a competitive plant community to limit the establishment of nonnative invasive cheatgrass at sites that were disturbed by previous claimants.

This project would not impact juniper cutting projects planned in the future.

Cutting juniper trees on the 20-acre claim would not appreciably impact bough harvesting due to the small size of the claim.

Cumulative Effects – There would be no cumulative effects to vegetation or woodlands as a result of implementing the proposed action.

8. Wildlife

Species that prefer dense juniper or mountain mahogany habitat would be displaced as excavation occurs selectively across the 20-acre claim area. Forage productivity and forage quality would be enhanced over the long term by the establishment of desirable forage species, especially bitterbrush, in the 20-acre claim area.

No disturbance would occur to the wintering mule deer as long as the time of mining operation is limited to May 5 through October as proposed.

Cumulative Effects – There would be no cumulative effects to wildlife species as a result of the implementation of the proposed action.

C. No Action Alternative - Critical Elements

1. Cultural Resources

There is one prehistoric archaeological site known to exist within the claim boundary and there are three additional prehistoric quarry sites adjacent to the claim boundary. Mining operations would present the potential for accidental or intentional damage, artifact collection by unauthorized people, and destruction of site integrity. This would be mitigated by providing a map to the operators of the location of the quarry site that is on the claim to help them avoid it, and asking the mine operators mark the claim boundary to help the operators avoid the off-claim sites.

2. Migratory Birds

Species that prefer dense juniper or mountain mahogany habitat would be disturbed as excavation occurs selectively across the 20-acre claim.

3. Noxious Weeds

Noxious weeds may establish in areas disturbed by mining. Opportunities exist for weed seed introduction on vehicles. The more times vehicles come to the site from elsewhere, the more likely introductions would occur. Measures to prevent noxious weed invasion on the claim would need to be followed voluntarily by the claimants/operators seeing no Plan of Operations would be required. There would be no financial guarantee to help ensure site management and reclamation as described in the proposed action and the BLM conditions of approval.

4. Solid Waste

There would be no accumulation of garbage or other solid waste on the claim due to removal and proper disposal by the operators. There would be no financial guarantee to help ensure site management and reclamation according to the proposed action and BLM conditions of approval.

D. No Action Alternative – Noncritical Elements

1. Fire Management/Closures and Restrictions

Removal of dense juniper and mountain mahogany vegetation at selected sites within the 20-acre claim would reduce wildland fire fuel at the sites. Vehicle activity at the sites would increase the likelihood of a fire at the sites. This would be mitigated by the operators following fire closures and restrictions.

2. Geology/Mineral Resources

Approximately 2 acres would be disturbed (0.1-acre per year multiplied by 20 years) and 40 cubic yards of obsidian would be removed from the claim (2 cubic yards per year multiplied by 20 years) and provided to purchasers to meet demand under this alternative. This would be in addition to the approximately 2 acres already disturbed and 20 cubic yards already removed in the past.

3. Lands/Realty

There would be no change to existing conditions. Hauling one truckload or less per week under dry conditions may be considered casual use. The claimants/operators may establish new tracks within the claim by repeated use.

4. Livestock Grazing Management

Cattle may graze on newly-seeded areas and as a result there may be slow reclamation success unless a temporary fence is installed around newly-seeded areas. Claim operations would have no effect on livestock grazing management. There would be no adjustment of AUMs on grazing permits to take into account mining on the claim.

5. Recreation

Recreationists would not be discouraged by physical obstacles from driving within the claim boundary and removing obsidian from the claim area. The general public would continue to be allowed to walk across the claim or drive elsewhere across the claim or remove obsidian from the obsidian collection area surrounding the claim.

Test pits and excavations would be left open for years due to the considerable amount of work required to excavate and backfill with hand tools.

6. Visual Resource Management

Approximately 2 acres of the visual landscape would slowly change from juniper trees and mountain mahogany thickets to increased amounts of sagebrush, bitterbrush, grasses, and forbs as a result of this action.

Removal of trees and other vegetation by mining operations would be visible until vegetation is reestablished. The claim is approximately one-half mile from Skull Creek Road, so small individual pits and stumps would probably not be noticed by the casual observer.

7. Vegetation/Woodlands

The no action alternative would not impact the Bureau Tracking species.

Nonnative invasive cheatgrass would continue to become established at sites disturbed by previous claimants unless the claimants voluntarily tilled by hand and seeded to establish shrubs, forbs, and grasses. There would be no financial guarantee to help ensure site management and reclamation as described in the proposed action and BLM conditions of approval.

8. Wildlife

No disturbance would occur to the wintering mule deer as long as the time of casual use activities is limited to May 5 through October.

Cumulative Effects – Under the no action alternative it is anticipated that there would be no cumulative effects on critical and noncritical resources.

## CHAPTER V. CONSULTATION AND COORDINATION

Craig Ratzat, Claimant and Operator

## CHAPTER VI. LIST OF PREPARERS

A. Participating BLM Staff

Bill Andersen, Rangeland Management Specialist  
Jim Buchanan, Supervisory Natural Resource Specialist  
Gary Foulkes, Planning and Environmental Coordinator  
Terri Geisler, Geologist/Hazmat Coordinator, Team Lead, BLM Lead Preparer  
Pam Keller, Computer Mapping Specialist (Geographic Information Specialist)  
Jonathan Manski, Fire Management  
Brian McCabe, Archaeologist  
Fred McDonald, Natural Resource Specialist (Recreation, VRM)  
Skip Renschler, Realty Specialist  
Jon Reponen, Forestry Specialist  
Lesley Richman, Rangeland Management Specialist/Weed Ecologist  
Beverlee Ruhland, Lead Preparer (Consultant)  
Fred Taylor, Wildlife Biologist  
Nora Taylor, Botanist  
Scott Thomas, Archaeologist

## CHAPTER VII. APPENDIX 1 – Plan of Operations